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W. B., No. 80.

U. S. DEPARTMENT OF AGRICULTURE,
WEATHER BUREAU.

INSTRUCTIONS

to

WIND-SIGNAL DISPLAYMEN

OF THE

WEATHER BUREAU.

WASHINGTON:
WEATHER BUREAU.
1896.

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Washington, D. C., January 1, 1896.

The following Instructions to Wind-Signal Displaymen, Weather Bureau, are published for the information of all concerned, being a modification of those promulgated February 1, 1892.

WILLIS L. MOORE,
Chief of Weather Bureau.

NOTE.—This book should be kept *neat and clean*. When a displayman is relieved, or is temporarily absent from his station, he will turn over these instructions to his successor, obtaining his receipt for the same, and will please forward this receipt, by mail, to the official in charge of his station.

INSTRUCTIONS TO WIND-SIGNAL DISPLAYMEN OF THE WEATHER BUREAU.

Warnings of the approach of windstorms will be published by the display of flags by day and lanterns by night, in connection with bulletins posted and reports furnished to newspapers, mariners, and others interested.

As it is impracticable to establish full reporting stations at all ports where it is necessary to display wind signals, arrangements have been made to display them at the most desirable points by employing displaymen to attend to the signals and render monthly reports on Form 1033. Stations of this class are called wind-signal display stations.

For the purpose of obtaining prompt communication by mail and telegraph, and to relieve this office of the routine duties in connection with the management of these stations, they are grouped in sections, and each section placed under charge of a neighboring Weather Bureau station, which is designated the section center.

Orders to display signals are sent to the observer in charge of the section center, or to the displayman direct, who at once distributes them.

INSTRUCTIONS.

1. The duties of displaymen consist in hoisting and lowering the proper signals, in compliance with orders received by telegraph or telephone, making a thorough distribution to the shipping interests of the information telegraphed with the signal orders, and in rendering monthly and semiannual reports.

2. With few exceptions, displaymen will receive all their instructions from, and render all reports and bills for services to, the officials in charge of their respective stations.

3. The display station at
is in
section, and will be under the supervision of the official in charge at
.....
and the receipt of all wind and direction signals will be acknowledged by mail, on Form 1071, to him.

4. Official communications by mail should be addressed to the official in charge, Weather Bureau,.....

The equipment of each display station will consist of—

1 book, Instructions to Wind-Signal Displaymen.	6 pens.
2 storm flags, (red with black center).	100 penalty envelopes, addressed "Weather Bureau Office."
1 white pennant.	1 penholder.
2 red pennants.	3 No. 2 black lead pencils.
1 red lantern.	30 Forms 1033.
1 white lantern.	100 Forms 1071.
1 set of halyards.	5 Forms 1090 A.
1 quire letter paper.	50 Forms 1043 B.
	10 Forms 2035.

5. Timely requisition will be made on the section center for such supplies as are required. The stationery above enumerated is the amount allowed for one year.

6. The flagstaff should be upon the roof of a building, if a good location on the ground cannot be secured, and equipped with a set of halyards.

7. If, at any time, the staff upon which the display is made becomes disabled, the displayman should take steps to secure the use of another, pending the repair of the injured staff, but in doing this he will incur no expense without being previously authorized by the Chief of the Weather Bureau.

STORM, WIND-DIRECTION, INFORMATION, AND HURRICANE SIGNALS.

8. The signals adopted by this Bureau for announcing the approach of windstorms are as follows:

(1.) The **Storm Signal**.—A red flag (8 feet square) with black center (3 feet square) with a red or white pennant above or below it, indicates that the storm is expected to be of marked violence.

(2.) The **Red Pennant** (8 feet hoist and 15 feet fly) displayed with the flags indicates easterly winds—that is, from northeast to south, inclusive, and that the storm center is approaching.

(3.) The **White Pennant** (8 feet hoist and 15 feet fly) displayed with the flags indicates westerly winds—that is, from north to southwest, inclusive, and that the storm center has passed.

(4.) When the **Red Pennant** is hoisted *above* the storm signal, winds are expected from the **northeast quadrant**; when *below*, from the **southeast quadrant**.

(5.) When the **White Pennant** is hoisted *above* the storm signal, winds are expected from the **northwest quadrant**; when *below*, from the **southwest quadrant**.

(6.) **Night Signals**.—By night a red light will indicate easterly winds; a white light *above* a red light will indicate westerly winds. No night hurricane or information signals are displayed.

(7.) The **Information Signal**, at seaboard or Gulf stations, consists of a red pennant, and indicates that the displayman has received information of a storm covering a limited area, dangerous only for vessels about to sail to certain points. The signal will serve as a notification to shipmasters that important information will be given them upon application to the displayman.

The **Information Signal**, at Lake stations, consists of a red or white pennant, and is a warning that winds dangerous to tows and small vessels may occur at the station displaying the signal. The expected direction of the wind is indicated by red for easterly, and white for westerly winds.

(8.) The **Hurricane Signal**.—Two storm flags (red with black centers), displayed one above the other, is used to announce the expected approach of tropical hurricanes, and also of those extremely severe and dangerous storms which occasionally move across the Lakes and the northern Atlantic Coast.

No distinctive night hurricane signal will be displayed, but when this signal is ordered during the day and is not lowered or changed before dark, the night storm signal will be displayed, the direction to be determined by the information contained in the message accompanying the order to hoist.

When orders to hoist this signal are received at any Weather Bureau station, every effort will be made by the officials and employees of the Bureau to give the warnings the widest possible distribution, and all vessels will be notified that it is dangerous to leave port.

The officers of the Customs Service, the Life-Saving Service, the Revenue-Cutter Service, and the Lighthouse Service, have been directed by the Secretary of the Treasury to assist the Weather Bureau in this matter by displaying the hurricane signal and by disseminating, so far as practicable, any information regarding storms and hurricanes that may be furnished them by this Bureau. The flags for use in this connection will be furnished by this Bureau.

Officials in charge of regular and special wind-signal display stations will communicate with such of these officers as may be stationed in their vicinity and arrange for their effective cooperation in the carrying out of these instructions.

The following is an example of an order to hoist signals:

WASHINGTON, D. C., *February 1, 1892.*
(Forwarded from Boston.)

To Displayman, Marblehead, Mass.:

Hoist northeast signals at 10.10 a. m. Storm of slight energy in Tennessee, moving easterly.

MOORE.

Signals will be changed in about the following words, viz:

"Change to southwest at 9.20 p. m."

All time used in orders is seventy-fifth meridian time, and displaymen must make the necessary correction in order to reduce it to their standard time.

10. The displayman, upon receiving a signal order, will hoist the signal, bulletin the order in as many conspicuous places as possible, and then acknowledge its receipt as explained in paragraphs 3 and 13.

11. The hoisting and lowering of signals must be done promptly.

12. Displaymen will receive with the order to hoist, and as often during the display as the Forecast Official considers necessary and practicable, through the section center, a brief statement, giving the location of the storm center and the probable direction in which it will move. This information will be given as wide a circulation as the means in the possession of the displaymen permit and the needs of the public demand.

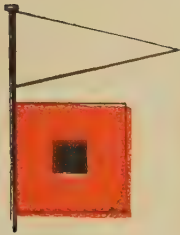
13. Orders to hoist or change wind signals will be acknowledged by mail on Form 1071, in about the following words:

"Hoist storm and northeast received 11.20 p. m."

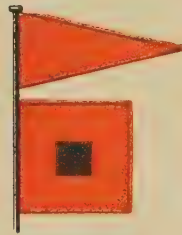
"Change southeast to northwest received 5.30 a. m."

14. Signals will not, under any circumstances, be *hoisted* by displaymen, except by orders from the section center, or from the Chief of the Weather Bureau.

STORM SIGNALS.



Northwesterly winds.



Northeasterly winds.



Southwesterly winds.



Southeasterly winds.

HURRICANE SIGNAL.



INFORMATION SIGNALS.

(Great Lakes.)



Easterly winds.

(Great Lakes.)



Westerly winds.

(Sea and Gulf Coasts.)



Signals will remain displayed *twenty-four hours* and no longer from the time specified in the order to hoist, change, or continue them, unless a subsequent telegram is received ordering them down.

15. During a display, lanterns will be lighted about sunset.

16. The cardboard bulletins, Form 1090-A, will be displayed at points most accessible to vesselmen, and copies of all signal messages written on Form 1043-B and attached thereto.

17. Everything connected with the station must be kept in perfect order, the lanterns constantly filled and trimmed, and there must be no delay in complying with all orders.

MONTHLY REPORTS.

18. A monthly report will be prepared on Form 1033 at each display station, the columns of which will be filled up with the data called for by the headings, and a note will be made in connection with each signal hoist as to whether it was a cautionary, storm, direction, or information signal.

19. The direction from which the wind is blowing will be designated by the eight principal points of the compass—north, northeast, east, southeast, south, southwest, west, northwest.

20. Newspaper clippings concerning storms or displays should be pinned to Form 1033.

21. If a signal is up at the end of the month, Form 1033 for that month will be retained until the signal is lowered, and the complete history of the signal given on that form.

22. If a signal is up at the beginning of the month, no data for that signal will be given on Form 1033.

23. Form 1033 will be forwarded to the official in charge, Weather Bureau, not later than the second of the succeeding month, except when delayed, as explained in paragraph 21.

24. The original record of the signals will be kept by entering on Form 1033, from time to time, as they occur, all the facts in relation to each storm. The original copy will be forwarded, as explained in paragraph 23, and a duplicate filed at the station.

25. When a displayman is temporarily absent from his station and can not sign Form 1033, he should instruct the person whom he has designated to attend to the duties during his absence to sign this form as "agent for displayman," but the bills and vouchers for services must, in all cases, be made and signed by the regularly appointed displayman.

26. The instructions given on the back of Form 1033, as to the manner of preparing this report, must be strictly complied with.

27. Displaymen, except those who serve gratuitously, will be paid

a certain sum per month, and that amount will cover all expenses, including compensation, special delivery, matches, oil, and keeping the flags in repair. The flags, halyards, lanterns, official forms, penalty envelopes, and stationery to be supplied from the office of the Chief of the Weather Bureau.

28. Whenever a displayman is relieved, all Government property in his possession at the time will be turned over to his successor, and proper receipts, in duplicate, taken therefor, one copy to be forwarded to the section center at once.

29. The Chief of the Weather Bureau reserves the right of withholding payment from any person who persistently neglects to make his reports accurately and forward them promptly.

30. Timely requisition will be made upon the official in charge

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for blanks, stationery, etc., whenever such supplies are required; the needs of the station must be anticipated in time to give the proper notice, and to allow time for the papers to reach this office, and the authority to issue therefrom; one month would seem to give ample time.

SEMIANNUAL REPORT.

31. Form 2035, semiannual report of signal equipments and stores, will be made out in duplicate, at the end of each six months, viz: June 30 and December 31 of each year. One copy will be mailed to the official in charge of Weather Bureau,.....

....., within ten days after the end of the period for which it is the report, and the other will be filed for future reference.

32. The following articles of Government property are "expendable," and need not be entered on Form 2035: Blank forms, pens, penholders, pencils, and other articles of stationery. The other articles enumerated in paragraph 4 are not expendable, and in the event of any of them becoming unserviceable, by ordinary wear and tear, they must not be thrown away or destroyed, but laid aside to be disposed of by this office. This applies to broken lanterns and torn or unserviceable flags. They will be accounted for on Form 2035 the same as if they were in serviceable condition, and will not be dropped from that report by the displayman until he receives authority to do so.

33. Form 2035 will be made up in the following manner, after the headings have been filled in:

The data to be noted in the column headed "On hand from last report" will be copied from the column headed "On hand to be accounted for" from the previous Form 2035. In the column headed

“Received during month of” will be noted, under the proper heading, any property that has been received during the six months. If the names of any of the articles received are not given in the printed list of property, they will be written in the blank spaces provided for the purpose, and the number or quantity of each noted in the proper columns. In the column headed “Total” will be entered, under each item, the amount on hand from last report, and what may have been received during the six months. In the column headed “Issued, expended, and returned” will be noted under each heading the amount of property that has been expended, returned to the section center, or to this office during the six months. In the column headed “On hand to be accounted for” should be entered under each heading the amount in the column headed “Total,” less the amount that has been returned to section center, to this office, and expended.

34. When a displayman is relieved from charge of a station he will make out, as a final report of property, three (3) copies of Form 2035; one to be forwarded to the observer in charge of the section center, as per paragraph 35; one for file at the station; and the other he will keep for his own information and protection in case discrepancies are found.

35. In making this final report of property the displayman will take up as “On hand from last report” all property for which he was accountable on his last Form 2035, also such property as may have been received since the last semiannual report was rendered; carry the whole list down to the column for “Total;” then, after deducting all articles expended, or returned, to date of transfer, he will report the remainder of the property as “On hand to be accounted for.”

36. Immediately under the certificate, at the bottom of the form, will be written “I certify I have this day received from (name of former displayman) the above mentioned articles in good condition, except as mentioned on margin.

(Name of new displayman.)”

37. The newly appointed displayman, before signing this certificate, should verify each article on this report, to assure himself that everything is on hand as stated, as his signature to this certificate is the former displayman’s receipt for the property.

